

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7718

Petition of Green Mountain Power Corporation)
("GMP") for a Certificate of Public Good,)
pursuant to 30 V.S.A. § 248(j), authorizing the)
reconductoring of its existing 3314 transmission)
line tap to the Airport Substation ("Airport Tap"))
in South Burlington, Vermont)

Order entered: 4/26/2011

I. INTRODUCTION

This docket involves a petition filed by Green Mountain Power Corporation ("GMP") requesting a certificate of public good ("CPG") under 30 V.S.A. § 248(j) for the reconductoring of its existing 3314 transmission line tap to the Airport Substation ("Airport Tap") in South Burlington, Vermont (the "Project"). In today's Order, we conclude that the Project will be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j); and the Project will promote the general good of the State.

II. PROCEDURAL HISTORY

On February 22, 2011, GMP filed a petition with the Public Service Board ("Board") pursuant to 30 V.S.A. § 248(j) for a CPG authorizing the reconductoring of its existing 3314 transmission line tap to the Airport Substation ("Airport Tap") in South Burlington, Vermont (the "Project"). GMP submitted prefiled testimony, proposed findings, and a proposed order pursuant to the requirements of 30 V.S.A. § 248(j).

Notice of the filing in this Docket was sent on March 18, 2011, to all parties specified in 30 V.S.A. § 248(a)(4)(C) and all other interested persons. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to

the substantive criteria of 30 V.S.A. § 248 must file their comments with the Board on or before April 15, 2011.

On March 18, 2011, the Board requested additional information concerning the petition and on March 25, 2011, GMP filed the requested information.

On April 8, 2011, the Vermont Agency of Natural Resources ("ANR") filed a letter stating that the petition does not raise any significant issues with respect to the substantive criteria of 30 V.S.A. § 248.

On April 15, 2011, the Vermont Department of Public Service ("Department") filed a letter stating that the petition does not raise any significant issues with respect to the substantive criteria of 30 V.S.A. § 248. On April 18, 2011, the Department filed a determination that the proposed project is consistent with the *Vermont Electric Plan*, in accordance with 30 V.S.A. § 202(f).

No other comments were received.

III. FINDINGS

1. The existing Airport Tap, approximately 2,700 feet in length, consists of the conductor and seven poles of cross-arm construction. Of these seven poles, six are fifty-foot, class three poles (43' above-ground) and one is a forty-five-foot, class four pole (38.5' above-ground). The line, located along Poor Farm Road in South Burlington, is a radial tap on the 3314 line that feeds Airport Substation #79 at 34.5 kV and provides a 4.16 kV distribution source to the Vermont Air National Guard base at the Burlington International Airport and to residential customers at Country Club Estates. Cecchini pf. at 2; exhs. GMP-TC-A-C.

2. The existing conductor was installed in 1952 and needs to be replaced with a larger conductor because of the effect of fault current on the existing conductor. Fault current is the temporary, abnormal current that flows through a line during a fault condition. The additions of 115/34.5 kV sources at the Essex and Taft's Corners substations have increased the available fault current on the Airport Tap line to unacceptable levels, which can cause damaging annealing to the existing conductor. Outages have occurred on the line due to conductor splice failure and wire fatigue. Cecchini pf. at 2-3.

3. The Project will involve replacing the existing #4 aluminum conductor, steel reinforced cable (Swan-0.25 inch diameter) with 4/0 all aluminum alloy 6201 conductor (Alliance-0.56 inch diameter), one of GMP's standard distribution conductors. Cecchini pf. at 3.

4. The Project will also involve replacing two poles. The Project will replace one of the six existing fifty-foot, class three poles with a pole the same height because of extensive woodpecker damage. The Project will also replace the one forty-five-foot, class four pole with a fifty-foot, class three pole, so that all the line's poles will be the same height. Both pole replacements will occur within the existing right-of-way and will coincide with the reconductoring to take advantage of the line outage required to complete the Project. Cecchini pf. at 3.

5. The existing conductor is rated at 140 amps or 8.4 MVA at 34.5 kV. The proposed conductor would be rated at 395 amps or 23.5 MVA at 34.5 kV. Cecchini pf. at 3.

6. The Project is estimated to cost approximately \$120,000 and will be accounted for as a capital cost. Cecchini pf. at 4.

7. GMP proposes commencing construction during the spring of 2011 and estimates that construction will be completed in less than one month. GMP will utilize a mobile substation to serve customer load during the installation of the new conductor. Cecchini pf. at 3-4; exhs. GMP-TC-A-C.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

8. The Project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. Cecchini pf. at 4-5. This finding is also supported by findings 9 and 10, below.

9. The Project will take place entirely within the existing right-of-way and will not impact land conservation measures contained in the plan of any affected municipality. Cecchini pf. at 4-5.

10. GMP sent notice of the Project to South Burlington's City Council and Planning Commission and the Chittenden County Regional Planning Commission. Neither of the Planning Commissions nor the City Council provided comments. GMP also contacted the Country Club Estates Association and the Vermont Air National Guard regarding the Project and neither entity requested additional information. Cecchini pf. at 5.

Need For Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

11. The Project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load-management measures. Cecchini pf. at 4-5. This finding is also supported by findings 12 through 14, below.

12. The need for the Project is not driven by the need to provide additional capacity. The Project is needed to replace an obsolete conductor installed in 1952 that cannot accommodate the existing fault current on the line. In addition, the Project will take advantage of the line outage needed for reconductoring to replace a damaged pole and replace a pole that does not conform to the heights of the other poles on the line. Cecchini pf. at 2-5.

13. The capacity of the existing conductor is 500 percent greater than the capacity provided by the 1.5 MVA transformer at the Airport Substation and the new conductor will have an even greater capacity. However, at this time, no additional capacity to serve current or anticipated electric demand will be provided because the line's capacity will still be limited by the existing transformer at the Airport Substation. The Project is only required to address the fault-current issue. Cecchini pf. at 2-4.

14. GMP did not consider the implementation of demand side management, generation or load response because the need for reconductoring the line was unrelated to load. Cecchini pf. at 6.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

15. The Project will not adversely affect system stability and reliability. The Project will enhance system stability and reliability by replacing an obsolete conductor. Cecchini pf. at 6; *see also* finding 2.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

16. The Project will result in an economic benefit to the State and its residents by enhancing transmission reliability and by creating work for various contractors and suppliers, which will be of economic benefit to the State by providing additional tax revenues. Cecchini pf. at 6.

**Aesthetics, Historic Sites, Air and
Water Purity, the Natural Environment and Public
Health and Safety**

[30 V.S.A. § 248(b)(5)]

17. The Project, as proposed, will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety. This finding is supported by findings 18 through 46, below, which are based on the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8), 8(A) and (9)(K).

Outstanding Resource Waters

[10 V.S.A. § 1424a(d)]

18. The Project is not located within the vicinity of any Outstanding Resource Waters. Cecchini pf. at 7.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

19. The Project, as proposed, will not result in undue water or air pollution. This finding is supported by findings 20 through 22, below.

20. The Project will not create undue air pollution. The Project's operation will not produce any air emissions and any impacts from vehicles and equipment during the Project's construction period will be minimal and temporary, lasting less than one month. Cecchini pf. at 3 and 7.

21. The Project will not result in undue noise pollution. The Project's construction and mobile substation may create noise, but will have little or no impact on the area's existing noise levels, which include noise from the nearby Burlington International Airport. In addition, any project-related noise will be temporary, lasting no more than one month. Cecchini pf. at 3 and 7.

22. The Project will not result in undue water pollution. The Project's earth disturbances will be limited to the replacement of two existing poles. Cecchini pf. at 3; Cecchini supp. pf. at 3; *see also* findings 23 through 38.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

23. The Project is not located near a headwaters area. Cecchini pf. at 8; exh. GMP-TC-A.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

24. The Project will meet any applicable health and environmental conservation regulations regarding the disposal of wastes and will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells. Cecchini pf. at 8.

Discussion

GMP stated that "the Project will not result in the production of any wastes."¹ Since GMP did not state how it will handle the two power poles that will be replaced, we will require

1. Cecchini pf. at 8.

that any construction-related waste, including the poles, be disposed of at a State-approved landfill or be salvaged and reused to the extent possible.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

25. The Project will not utilize any water during construction. Cecchini pf. at 8.

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

26. The Project will not restrict or divert the flow of flood waters, or endanger the health, safety and welfare of the public or of riparian owners during flooding, and will not significantly increase the peak discharge of the river or stream within or downstream from the area of development or endanger the health, safety, or welfare of the public or riparian owners during flooding. This finding is supported by finding 27, below.

27. One Project component, the dead-end pole replacement ("Taglet 70791"), will be located within the floodway; however, it will merely replace an existing pole and therefore will not further restrict or divert the flow of flood waters and will not increase peak discharge. Cecchini pf. at 8; exhs. GMP-TC-A-C.

Streams

[10 V.S.A. § 6086(a)(1)(E)]

28. The Project will maintain the natural conditions of the stream in the vicinity of the proposed project and will not endanger the health, safety, or welfare of the public or adjoining landowners. Cecchini pf. at 9. This finding is also supported by finding 29, below.

29. One project component, Taglet 70791, will be located near a stream. Taglet 70791 is located a short distance south of Allen Brook and east of an unnamed tributary to Allen Brook. However, the replacement pole will not be located on the banks of either stream and will not impact the natural condition of the stream. Cecchini pf. at 9.

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

30. The Project will not impact any shorelines. Cecchini pf. at 9.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

31. The Project will have no undue or adverse impacts on wetlands. Cecchini pf. at 9. This finding is also supported by findings 32 through 34, below.

32. Taglet 70791 will be located approximately 500 feet from a Class II wetland as mapped by the Vermont Significant Wetland Inventory and approximately 70 feet from a Class II wetland as mapped in conjunction with the East Avenue Loop project (Docket 7314). Cecchini pf. at 9; Cecchini supp. pf. at 2.

33. The Project will not involve filling or grading in the wetland or wetlands buffer. In addition, any extra soils removed during the pole replacement will be minimal and will be collected and removed. Cecchini supp. pf. at 2.

34. The Project will occur entirely within the existing right-of-way and will not require clearing. Cecchini pf. at 9; Cecchini supp. pf. at 2.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. § 6086(a)(2) and (3)]

35. The Project will not utilize water and, therefore, will not impact existing water supplies. Cecchini pf. at 9.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

36. The Project will not result in unreasonable soil erosion or reduce the ability of the land to hold water so that a dangerous or unhealthy condition may result. Cecchini pf. at 10. This finding is also supported by findings 37 and 38, below.

37. The only project-related soil disturbances will be for the two pole replacements. However, any disturbed soils will be restored with appropriate soil erosion measures and all construction will be undertaken in compliance with the Vermont Department of Environmental Conservation's Low Risk Site Handbook for Erosion Prevention and Sediment Control (2006). Cecchini pf. at 10.

38. The Project does not require a National Pollutant Discharge Elimination System permit. Cecchini pf. at 10.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

39. During construction, there will be a minimal and temporary increase in traffic for the transport of equipment and supplies, and the delivery and removal of the mobile substation trailer. The Project will not cause unreasonable congestion or unsafe conditions with respect to transportation systems. Cecchini pf. at 4 and 10.

Educational Services

[10 V.S.A. § 6086(a)(6)]

40. The Project will not impact any municipality's ability to provide educational services. Cecchini pf. at 10.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

41. The Project will not require any municipal or government services. Cecchini pf. at 10.

**Aesthetics, Historic Sites or Rare
and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

42. The Project will not have an undue adverse effect on the scenic or natural beauty, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 43 and 44, below.

43. The Project will not have an adverse aesthetic impact on the area. The Project will occur entirely within the existing Airport Tap's right-of-way and will not involve any clearing. The Project will increase the diameter of the conductor by approximately 0.25 inch and will increase the height of one pole by five feet. The Project will be substantially similar to the existing line and will be consistent, and in harmony, with the previously developed nature of the area. Cecchini pf. at 3 and 11; Cecchini supp. pf. at 2; exhs. GMP-TC-B-C.

44. The Project will not impact any historic sites, archeologically sensitive areas, or rare and irreplaceable natural areas. Cecchini pf. at 11.

**Necessary Wildlife Habitat and
Endangered Species**

[10 V.S.A. § 6086(a)(8)(A)]

45. There are no known endangered species within the Project site or in close proximity to the proposed pole replacements. The Project will not impact, destroy, or imperil necessary wildlife habitat or endangered species. Cecchini pf. at 12; Cecchini supp. pf. at 2.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

46. The Project will not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public utility facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to such facilities, services, or lands. Cecchini pf. at 12.

Public Health and Safety**[30 V.S.A. § 248(b)(5)]**

47. The Project will be constructed in accordance with the National Electric Safety Code. Cecchini supp. pf. at 3.

Least-Cost Integrated Resource Plan**[30 V.S.A. § 248(b)(6)]**

48. The Project is consistent with GMP's 2007 Least-Cost Integrated Resource Plan, approved by the Board in Docket 7319, which provides that GMP will replace existing undersized conductors when a circuit is experiencing voltage or reliability issues. *Investigation into GMP's 2007 IRP*, Docket 7319, Order of 3/6/08; Cecchini pf. at 12.

Compliance With Electric Energy Plan**[30 V.S.A. § 248(b)(7)]**

49. The Project is consistent with the *Vermont Electric Plan*. This finding is also supported by findings 50 and 51, below.

50. The Project will improve reliability by reconductoring an obsolete conductor to provide sufficient fault current on the line. Cecchini pf. at 2-3.

51. On April 18, 2011, the Department filed a letter stating that the Project is consistent with the *Vermont Electric Plan*, pursuant to 30 V.S.A. § 202(f). Letter of April 18, 2011, from Laura Scanlan Beliveau, Esq., to Susan Hudson, Clerk of the Board.

Outstanding Resource Waters**[30 V.S.A. § 248(b)(8)]**

52. The Project is not located within the vicinity of any Outstanding Resource Waters. Cecchini pf. at 7.

Existing Transmission Facilities

[30 V.S.A. § 248(b)(10)]

53. The Project will have a positive effect on existing or planned transmission facilities by reconductoring an obsolete conductor to address the insufficiency of available fault current on the line, which can cause damaging annealing to the existing conductor. Cecchini pf. at 2-3 and 13.

IV. CONCLUSION

Based upon all of the above findings, the Board concludes that the proposed construction will be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized in 30 V.S.A. § 248(j); and the proposed project will promote the general good of the State.

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The proposed reconductoring of the existing 3314 transmission line tap to the Airport Substation ("Airport Tap") in South Burlington, Vermont, by Green Mountain Power Corporation ("GMP") (the "Project"), in accordance with the evidence and plans submitted in this proceeding, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and a certificate of public good to that effect shall be issued in this matter.
2. The Project shall be constructed in accordance with the evidence and plans submitted in these proceedings. Any material deviation from these plans must be approved by the Board.
3. Prior to proceeding with construction, GMP shall obtain all necessary permits and approvals. Construction, operation, and maintenance of the proposed Project shall be in accordance with such permits and approvals, and with all other applicable regulations, including those of the Vermont Agency of Natural Resources and the U.S. Army Corps of Engineers.
4. The Project shall be constructed in accordance with the National Electric Safety Code.

5. GMP shall dispose of any construction-related waste at a State-approved landfill or salvage and reuse such materials to the extent possible.

Dated at Montpelier, Vermont, this 26th day of April, 2011.

<u>s/James Volz</u>)	
)	PUBLIC SERVICE
)	
<u>s/David C. Coen</u>)	BOARD
)	
)	OF VERMONT
<u>s/John D. Burke</u>)	

OFFICE OF THE CLERK

FILED: April 26, 2011

ATTEST: s/Judith C. Whitney
Deputy Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within